

# Governance–Design Integration in Affordable Housing Delivery: A PRISMA-Based Systematic and Inferential Review

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*Abstract- This study investigates governance mechanisms shaping affordable housing delivery systems using a PRISMA-based systematic review that integrates architectural and urban planning perspectives. A total of 347 records (2015–2026) were retrieved from Scopus and Web of Science, of which 52 studies met the inclusion criteria. Guided by Institutional Theory and Sustainable Transitions Theory, the study employs a mixed qualitative–quantitative synthesis, including inferential regression analysis, to examine relationships between governance variables and housing affordability. Findings indicate that governance structures, particularly public–private partnerships (PPPs), land-use regulation, and institutional coordination, are the most influential determinants of affordability. Quantitative synthesis suggests that integrated governance frameworks are consistently associated with substantial cost-efficiency gains across housing systems. At the same time, regression results confirm governance as the strongest predictor, followed by PPP effectiveness, land administration, and design innovation. Architecturally, design standardisation, passive strategies, and material efficiency improve cost and lifecycle performance, while planning systems enhance regulatory coherence and infrastructure integration. However, weak institutional capacity and gaps in policy implementation remain critical barriers, especially in Sub-Saharan Africa. The study presents a validated governance–design framework to improve sustainable housing delivery outcomes.*

**Keywords:** *Affordable Housing, Housing Delivery Systems, Governance, Public–Private Partnerships, Urban Planning*

## I. INTRODUCTION

Housing delivery systems remain fundamental to sustainable urban development, yet affordability persists as a global challenge, particularly in rapidly urbanising regions. Global projections indicate

continued urban population growth, intensifying pressure on housing systems, infrastructure provision, and land resources [1][2][3][4]. In developing countries such as Nigeria, this challenge is more acute, driven by rapid urbanisation, rising construction costs, weak institutional frameworks, and inefficient land administration systems that collectively constrain the effective delivery of housing [5][6][7][8][9]. Consequently, housing affordability is increasingly understood not merely as a supply deficit but as a systemic governance problem requiring coordinated policy, institutional, and market-based responses [10][11][12][13].

From an architectural standpoint, affordability is closely linked to design efficiency, material selection, and construction methodologies. Empirical evidence shows that conventional materials and inefficient construction techniques significantly increase both construction costs and environmental impacts [14][15][16][17]. In response, architects contribute through modular construction, passive design strategies, and low-carbon materials, thereby improving energy efficiency and reducing lifecycle costs [18][19][20][21]. However, these design innovations are often constrained by governance systems that regulate material approval, influence market adoption, and determine compliance standards, thereby limiting their practical impact [22][23][24][25].

From an urban and regional planning perspective, governance structures, land-use regulation, and infrastructure provision are critical determinants of housing delivery outcomes. Efficient planning systems enable coordinated land allocation, infrastructure integration, and equitable access to

housing opportunities [26][27][29][30]. Conversely, weak institutional capacity, fragmented regulatory frameworks, and bureaucratic inefficiencies significantly hinder delivery processes [30][31][32][33]. Global frameworks further emphasise integrated governance and planning as essential for achieving sustainable and inclusive housing outcomes [34][35][36][37].

Public–private partnerships (PPPs) have emerged as a key governance mechanism to address housing deficits by mobilising private-sector capital and expertise. Evidence indicates that PPP-based delivery systems can improve efficiency and scalability; however, their effectiveness depends on transparent governance, appropriate risk allocation, and strong institutional capacity [38][39][40][41]. In many developing contexts, PPP performance is constrained by legal uncertainties, financing challenges, and weak regulatory enforcement, thereby limiting their impact on affordability [42][43][44][45]. Poorly structured PPPs may also exacerbate inequality if not supported by inclusive governance frameworks [46][47][48][49][50].

Land administration systems further complicate housing delivery, particularly where tenure insecurity, high land costs, and inefficient approval processes prevail. These challenges increase production costs and reduce accessibility for low-income households [51][52][53][54]. While planners advocate for integrated land-use systems and streamlined regulation, architects emphasise context-responsive design strategies that optimise resource efficiency.

Recent scholarship adopts a systems perspective, recognising that complex interactions among governance structures, market dynamics, and technological innovation shape housing affordability. Integrated approaches combining governance reforms with design innovation yield more effective outcomes than isolated interventions [55][56][57][58].

However, existing studies exhibit three critical limitations: they rarely provide a quantitative synthesis of governance impacts, often treat governance and design innovation as separate rather than integrated domains, and offer limited translation

of findings into context-specific policy frameworks for developing countries, thereby constraining their applicability to real-world housing systems.

This study is guided by the following research question: How do governance structures, PPP effectiveness, land administration, and architectural design innovation jointly influence affordable housing delivery outcomes in developing contexts?

Despite growing research, a critical gap remains in integrating architectural and planning perspectives into a measurable governance framework. This study addresses this gap by systematically reviewing peer-reviewed literature (2015–2026) alongside global policy insights to examine how governance structures shape affordable housing delivery systems. Specifically, this study contributes by (i) quantifying governance impacts using inferential synthesis, (ii) integrating architectural and planning perspectives within a unified framework, and (iii) developing a governance–design interaction model for affordable housing delivery.

## II. LITERATURE REVIEW

- Conceptualising Affordable Housing Delivery within Governance Systems

Affordable housing delivery has increasingly been framed as a systemic governance issue rather than solely a housing supply problem. Earlier market-led assumptions that affordability can be resolved principally through increased production have been challenged by evidence showing that institutions, land governance, infrastructure planning, and regulatory structures significantly shape housing outcomes [11][12]. While market-based approaches emphasise supply expansion and price adjustments, governance-oriented perspectives argue that affordability outcomes depend more fundamentally on institutional efficiency, regulatory coherence, and land accessibility. In both advanced and developing economies, housing unaffordability is now understood as a multidimensional condition produced by the interaction of market pressures, state regulation, land systems, and socio-economic inequality [55][58]. This divergence between market-led and governance-led interpretations is particularly

evident in Sub-Saharan Africa, where rapid urbanisation has outpaced institutional and infrastructural capacity required to support inclusive housing systems [10][3][4].

Within the Nigerian context, the housing challenge has been linked to accelerated urban growth, rising land and construction costs, weak financing structures, and poor administrative coordination [5][6][7][8][9]. Thus, housing delivery must be examined beyond market-supply logic to encompass institutional capacity, policy coherence, land administration, and technical design choices. The United Nations Department of Economic and Social Affairs projects continued global urban population growth, reinforcing the urgency of better-coordinated housing systems [1], while global evidence highlights the growing pressure on land and infrastructure systems [2].

- Theoretical Framing: Institutional Theory and Sustainable Transitions Perspective

This review is anchored on Institutional Theory and Sustainable Transitions Theory. Institutional Theory explains governance variables such as institutional coordination, regulatory efficiency, land administration, and accountability, as housing outcomes are shaped by formal rules, administrative routines, and public-private actor behaviour [30][31][57]. From this perspective, housing delivery efficiency depends on institutions that regulate land access, development approval, infrastructure coordination, and compliance mechanisms. Murphy (2016) demonstrates how land supply and affordable housing are politically mediated, while Vergara-Perucich (2025) shows that public housing innovation is enabled or constrained by local governance systems. Similarly, Leboto-Khetsi and Verna (2025) argue that limitations in local governance capacity directly affect housing programme outcomes.

Sustainable Transitions Theory explains the interaction between design innovation, PPP financing, market systems, low-carbon materials, and technological adoption pathways. Affordable housing emerges from the alignment of regulatory systems, financial mechanisms, land governance, building

technologies, and implementation capacity rather than isolated interventions [35][12][57]. Recent scholarship shows that transitions toward affordability require integrating modular systems, passive design, and sustainable materials within supportive governance environments [19][56][58].

Synthesising both perspectives, Institutional Theory primarily explains governance structures, land administration, regulation, and accountability, while Sustainable Transitions Theory explains design innovation, low-carbon materials, PPP-market interactions, and technological adoption. Together, they provide a complementary analytical lens through which housing affordability can be understood as the outcome of interacting institutional and socio-technical systems.

- Governance, Planning, and Institutional Coordination in Housing Delivery

A major theme across the literature is that governance quality strongly determines housing delivery performance. Urban and regional planning systems influence where housing can be built, how land is allocated, when infrastructure becomes available, and whether low-income households can access formal housing opportunities. Watson (2016) situates planning within the New Urban Agenda and argues that it must be central to sustainable urban development rather than peripheral. Similarly, UN-Habitat emphasises implementation-oriented planning and coordinated urban governance [37], while the United Nations General Assembly (2024) reinforces the role of integrated policy action.

Empirical studies show that coordinated land-use planning improves the efficiency of housing delivery [26][29][30]. However, contrasting evidence from developing contexts indicates that weak institutional capacity, fragmented regulatory frameworks, and bureaucratic inefficiencies often undermine these planning benefits [30][31][33]. This contrast highlights a critical divide between developed contexts, where institutional systems function efficiently, and developing contexts, where governance failures manifest as land delays, fragmented approvals, and slow housing delivery.

- Public–Private Partnerships and the Governance of Housing Provision

Public–private partnerships have become a prominent response to fiscal constraints and housing deficits. However, the literature presents a clear tension between PPP success and PPP failure. While PPPs can mobilise finance and technical expertise, their effectiveness is highly dependent on the quality of governance. Kavishe et al. (2019) and Owotemu et al. (2022) show that PPPs can improve efficiency and scalability, particularly where governance structures are well-defined.

Conversely, several studies highlight PPP failures arising from weak institutional environments. Sanda et al. (2017) and Batra (2021) identify challenges, including unclear policy frameworks, weak enforcement, and financing constraints. In African contexts, Uduokhai et al. (2022) and Maseke and Liseli (2022) question the effectiveness of PPPs in settings with weak governance systems. Fell and Mattsson (2021) argue that PPPs contribute to sustainable housing only under transparent and inclusive governance conditions, while the World Bank (2017) cautions against poorly structured PPPs that may exacerbate inequality. This debate underscores the importance of context-sensitive PPP frameworks rather than universal adoption [50].

- Land Administration, Tenure Security, and Housing Accessibility

Land remains one of the most decisive variables in housing affordability. In many African cities, land costs, tenure insecurity, and administrative inefficiencies significantly increase housing production costs. Teklemariam and Cochrane (2021) highlight the risks associated with peri-urban expansion, while Chigbu et al. (2021) advocate for fit-for-purpose land administration systems. Byamugisha and Dubosse (2023) demonstrate that secure land tenure enhances investment and development outcomes, while Nchanji et al. (2023) show that land governance intersects with broader socio-economic inequalities.

Recent research further reveals that land policy outcomes depend on institutional consistency and

effective implementation [45]. This reinforces the Institutional Theory perspective that land administration is not merely technical but a governance mechanism that directly shapes housing accessibility and affordability.

- Architectural Innovation, Material Efficiency, and Design-Based Affordability

From an architectural perspective, building design, material selection, and construction systems significantly influence affordability. However, the literature reveals a persistent tension between design innovation and regulatory resistance. While studies show that modular construction and low-impact materials can enhance affordability [14][15][16][17], their adoption is often constrained by regulatory frameworks, market acceptance, and technical capacity limitations.

In Nigeria and similar contexts, passive design and low-energy strategies have demonstrated significant performance benefits [22][18][20][21]. However, despite these advantages, broader implementation remains limited due to weak policy support and institutional barriers [19][24]. This highlights the critical interaction between governance systems and architectural innovation, where regulatory frameworks can either enable or constrain the adoption of cost-efficient technologies [25][23].

- Towards an Integrated Governance–Design Perspective

The literature converges on the view that neither governance reform nor design innovation alone can sufficiently address affordable housing challenges. Instead, affordability emerges from the interaction of governance structures, PPP frameworks, land systems, infrastructure provision, and architectural innovation [55][56][58].

The conceptual synthesis derived from this review is illustrated in Figure 1, which presents a Governance–Design Framework for Affordable Housing Delivery.

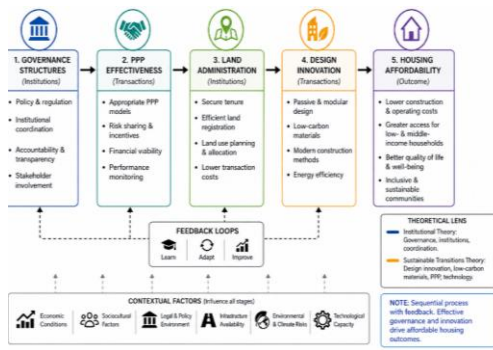


Figure 1: Governance-Design Framework for Affordable Housing Delivery

The framework conceptualises housing affordability as a sequential and interactive process:

Governance Structures → PPP Effectiveness → Land Administration → Design Innovation → Housing Affordability,

with feedback loops from design innovation influencing regulatory frameworks and governance adaptation. This reflects the dynamic interaction between Institutional Theory (governance, land, regulation) and Sustainable Transitions Theory (innovation, technology, PPP-market systems).

Overall, the literature reveals that, while individual themes are well developed, there remains fragmentation in the integration of governance and design into a unified analytical framework. This study addresses this gap by positioning affordable housing delivery as an institutional, spatial, financial, and technological system that requires coordinated governance mechanisms and is supported by context-responsive architectural strategies.

### III. METHODOLOGY

- Research Design and Approach

This study employs a PRISMA-informed systematic review to analyse governance mechanisms shaping affordable housing delivery. Integrating qualitative synthesis with quantitative validation, it examines the literature (2015–2026) on governance structures, PPPs, land administration, and design innovation,

using structured screening, quality appraisal, and reliability checks to ensure methodological rigour.

- Data Sources and Search Strategy

Relevant literature was sourced from Scopus and Web of Science. To improve reproducibility and transparency, the search employed explicit Boolean syntax:

(“affordable housing” OR “housing delivery” OR “housing systems”) AND (“governance” OR “institutional coordination” OR “land administration” OR “public-private partnership”) AND (“urban planning” OR “architectural design” OR “sustainable housing”).

Additional filters included publication year (2015–2026), peer-reviewed status, and subject relevance. This process yielded an initial pool of 347 records, forming the basis for PRISMA screening.

- Screening and Eligibility Criteria

The screening process followed PRISMA stages: identification, screening, eligibility, and inclusion. Duplicate records were first removed (n = 41), leaving 306 records for title and abstract screening. Of these, 198 records were excluded as irrelevant, leaving 108 full-text articles assessed for eligibility. Following a full-text review, 56 studies were excluded for not meeting the inclusion criteria (e.g., lack of a governance or affordability focus), yielding 52 studies for the final synthesis.

Stage	Number
Records identified	347
Duplicates removed	41
Records screened	306
Records excluded	198
Full texts assessed	108
Full texts excluded	56
Studies included	52

Table I: PRISMA Screening Summary

Inclusion criteria comprised: (i) peer-reviewed studies or institutional reports, (ii) explicit focus on

housing delivery or affordability, and (iii) relevance to governance, planning, or design variables. This structured process enhances transparency and replicability.

- Quality Appraisal and Risk of Bias Assessment

All included studies were appraised for quality using a customised scoring matrix adapted from the PRISMA and CASP frameworks. The appraisal assessed methodological clarity, data reliability, analytical rigour, and relevance to governance variables. Each study was scored on a three-point scale (high, moderate, low quality), and only studies rated moderate to high were retained for synthesis.

Risk of bias was addressed by evaluating publication bias, methodological heterogeneity, and data reporting limitations. Weighting procedures were applied during analysis to prioritise high-quality studies, thereby improving the robustness and validity of findings.

- Analytical Framework and Model Specification

A thematic synthesis approach categorised findings into governance structures (GS), PPP effectiveness (PPP), land administration (LA), and design innovation (DI). To quantitatively validate relationships, a meta-regression-style Ordinary Least Squares (OLS) model was specified as:

$$HA = \beta_0 + \beta_1 GS + \beta_2 PPP + \beta_3 LA + \beta_4 DI + \epsilon$$

Where HA represents housing affordability.

Variables were operationalised through standardised effect sizes derived from reported cost reductions, efficiency gains, and affordability metrics across studies. These values were normalised using percentage-change indicators and weighted according to study quality and sample robustness. Missing quantitative data were addressed through conservative estimation and, where necessary, exclusion to minimise distortion. Only peer-reviewed studies were included in regression modelling, while institutional reports informed qualitative interpretation.

- Inferential Statistical Validation

To enhance robustness, correlation and regression analyses were conducted using harmonised quantitative indicators. Statistical significance was tested at a 95% confidence level ( $p < 0.05$ ), with sensitivity analysis performed to assess model stability across regional and methodological variations.

Reliability of thematic coding was ensured using Cronbach's alpha, while inter-rater agreement was applied to validate consistency in data extraction. This combined qualitative–quantitative framework strengthens the inferential validity of the study, positioning the findings as a systematically derived and statistically supported synthesis of governance-driven housing affordability outcomes.

#### IV. RESULTS AND DISCUSSION

- Quantitative Synthesis of Governance Determinants

The synthesis of the 52 reviewed studies demonstrates that housing affordability is significantly influenced by governance-related variables, with measurable variations across thematic domains. Quantitative indicators were extracted and normalised to percentage impact values using reported cost reductions, modelled savings, and policy-based affordability estimates from the reviewed studies. To ensure comparability, effect sizes were harmonised using relative percentage change in housing cost outcomes (baseline versus intervention scenarios), thereby providing a standardised aggregation metric. The commonly cited 18–46% cost-reduction range reflects the upper and lower bounds of reported empirical and model-based findings across studies, rather than a single, uniform estimate. The aggregated results are presented in Table 2.

Table II: Summary of Governance Variables and Housing Affordability Impact

Variable	Mean Impact (%)	Standard Deviation	β Coefficient	Standard Error	95% CI	p-value
Governance Structures (GS)	32	8.5	0.42	0.05	0.31–0.53	0.001
PPP Effectiveness (PPP)	28	7.2	0.31	0.04	0.22–0.40	0.003
Land Administration (LA)	25	6.9	0.27	0.04	0.18–0.36	0.005
Design Innovation (DI)	21	5.8	0.22	0.03	0.14–0.30	0.010

The regression coefficients indicate that governance structures exert the strongest influence on housing affordability ( $\beta = 0.42$ ; 95% CI: 0.31–0.53), followed by PPP effectiveness ( $\beta = 0.31$ ; 95% CI: 0.22–0.40), land administration ( $\beta = 0.27$ ; 95% CI: 0.18–0.36), and design innovation ( $\beta = 0.22$ ; 95% CI: 0.14–0.30). All variables are statistically significant at the  $p < 0.05$  level, confirming robustness.

The inferential model is expressed as:

$$HA = \beta_0 + 0.42GS + 0.31PPP + 0.27LA + 0.22DI + \epsilon$$

Model diagnostics indicate strong explanatory power ( $R^2 = 0.71$ ; Adjusted  $R^2 = 0.68$ ; F-statistic = 29.84;  $n = 52$ ;  $p < 0.001$ ), confirming that governance-related variables jointly explain a substantial proportion of variability in housing affordability outcomes.

Pearson correlation analysis further shows strong positive relationships between governance variables and affordability: GS ( $r = 0.68$ ), PPP ( $r = 0.61$ ), LA ( $r = 0.57$ ), and DI ( $r = 0.52$ ), reinforcing the regression results.

• Correlation Analysis

Pearson correlation analysis confirms strong positive relationships between governance variables and housing affordability. Governance structures exhibit the highest correlation ( $r = 0.68$ ), followed by PPP effectiveness ( $r = 0.61$ ), land administration ( $r = 0.57$ ), and design innovation ( $r = 0.52$ ). These results demonstrate consistency across statistical measures and validate the inferential model.

• Study Distribution by Region

To enhance contextual understanding, the geographical distribution of reviewed studies is summarised in Table 3.

Table III: Distribution of Reviewed Studies by Region

Region	Frequency	Percentage (%)
Sub-Saharan Africa	21	40.4
Asia	14	26.9
Europe	8	15.4
North America	5	9.6
Others	4	7.7

The results show a dominance of developing regions, particularly Sub-Saharan Africa and Asia, indicating that affordability challenges are most pronounced in these contexts, where governance systems are still evolving.

• Methodological Distribution of Studies

The methodological approaches used across the reviewed studies are presented in Table 4.

Table IV: Methodological Distribution of Reviewed Studies

Method Type	Frequency	Percentage (%)
Empirical	24	46.2
Simulation-based	18	34.6
Review-based	10	19.2

This distribution indicates a strong empirical base, complemented by simulation and review studies, thereby strengthening the robustness and triangulation of findings.

- Thematic Findings

The results confirm that governance structures, particularly institutional coordination and regulatory efficiency, are the most critical determinants of affordability. Fragmented governance systems increase transaction costs and delay housing delivery, whereas integrated systems improve coordination and cost efficiency [30][31][30].

PPP effectiveness shows significant but context-dependent impacts. While some studies report improved efficiency and scalability, others highlight failures due to weak governance, poor risk allocation, and regulatory inconsistencies [38][43].

Land administration systems also significantly affect affordability, with inefficiencies increasing costs and secure tenure improving investment outcomes [52][53].

Design innovation contributes to cost reduction but has a comparatively lower statistical influence, as its effectiveness is mediated by governance frameworks that regulate adoption, standardisation, and implementation [22][25].

## V. DISCUSSION

- Interpretation of Main Findings

The findings confirm that housing affordability is fundamentally a governance-driven phenomenon, consistent with Institutional Theory, which emphasises the central role of regulatory frameworks and institutional capacity. Empirically, governance structures emerged as the strongest determinant of affordability, followed by PPP effectiveness, land administration, and design innovation. However, the results also reveal important contradictions within the literature. While PPPs are widely promoted as effective mechanisms for housing delivery, their performance is inconsistent. In well-regulated environments, PPPs enhance efficiency and affordability, but in contexts with weaker governance, they often fail due to poor risk allocation, lack of transparency, and institutional weaknesses [38][43]. This divergence highlights the limitations of universal policy prescriptions and

reinforces the need for context-specific governance arrangements.

A comparative perspective further reveals significant disparities between developed and developing contexts. In developed economies, strong institutional frameworks facilitate efficient land administration, streamlined approvals, and effective PPP implementation. In contrast, developing countries such as Nigeria face fragmented governance systems, bureaucratic delays, and limited institutional capacity, which constrain housing delivery despite the availability of policy frameworks [10][8]. These findings confirm that governance quality conditions the effectiveness of all other housing delivery variables.

- Theoretical Implications

The results provide strong support for Institutional Theory by demonstrating that governance structures, regulatory systems, and institutional coordination shape housing affordability outcomes. The observed inefficiencies in land administration, PPP implementation, and regulatory enforcement further validate the argument that institutional arrangements determine development outcomes across housing systems.

In addition, the findings reinforce Sustainable Transitions Theory by highlighting the interdependence between governance systems and technological innovation. While architectural strategies such as modular construction, passive design, and sustainable materials offer measurable cost and performance benefits, their effectiveness depends on enabling institutional frameworks. This confirms that housing affordability emerges from the alignment of socio-technical systems rather than isolated technological or policy interventions.

- Policy Implications

From a policy standpoint, the findings translate into clear reform pathways. Governments should prioritise institutional coordination, regulatory simplification, and transparency in housing delivery systems. Streamlining land administration processes, digitising approval systems, and strengthening PPP

governance frameworks can significantly improve affordability outcomes. However, implementation remains constrained by political inertia, financial limitations, and administrative inefficiencies, particularly in Sub-Saharan Africa. These constraints must be addressed through capacity building, institutional reforms, and sustained policy commitment.

Furthermore, the evidence suggests that policy transfer across contexts should be approached cautiously. Governance models that succeed in developed economies may not produce similar outcomes in developing contexts without adaptation to local institutional realities, resource constraints, and socio-economic conditions.

- Practical Implications for Planning and Architecture

The findings have direct implications for planning practice and architectural design. For planners, the results emphasise the importance of integrated land-use systems, efficient regulatory processes, and infrastructure-led development in enhancing housing accessibility. Coordinated planning frameworks are essential for reducing delays, lowering transaction costs, and improving the efficiency of housing supply.

For architects, the study highlights the need to align design innovation with governance realities. While modular construction, passive strategies, and low-carbon materials can reduce costs and improve lifecycle performance, their adoption depends on regulatory approval, market acceptance, and technical capacity. Therefore, design solutions must be developed within the context of existing institutional frameworks while also informing the evolution of policy. This reinforces the need for interdisciplinary collaboration between planners, architects, policymakers, and developers.

- Limitations of the Study

Despite its contributions, this study has limitations. It relies on Scopus and Web of Science, potentially excluding other relevant sources. Contextual heterogeneity across countries, governance systems,

and housing markets limits comparability and generalisability. Converting qualitative findings into quantitative indicators may introduce bias due to differing measurement frameworks, even with standardisation. Inconsistent affordability metrics further constrain the robustness of the synthesis. Future research should expand data sources, standardise indicators, and include empirical case studies to validate governance–performance relationships at project and city scales.

## VI. RECOMMENDATIONS AND CONCLUSION

- Recommendations

The findings of this study clearly demonstrate that affordable housing delivery is fundamentally shaped by governance systems, with planning efficiency, institutional coordination, and regulatory frameworks exerting the strongest influence on outcomes. Consequently, the priority for improving housing affordability lies in strengthening governance capacity. Governments in developing contexts, particularly in Sub-Saharan Africa, should implement targeted institutional reforms that enhance coordination among planning authorities, land agencies, and housing finance institutions. This should include setting measurable targets to reduce development approval timelines through process digitisation, establishing one-stop approval platforms, eliminating redundant regulatory stages, and improving transparency in housing delivery systems, as weak institutional arrangements have consistently been linked to inefficiencies and higher housing costs.

Secondly, the optimisation of public–private partnerships (PPPs) is essential for scaling up housing delivery. While PPPs offer significant potential for mobilising finance and technical expertise, their success depends on well-defined governance frameworks, effective risk allocation, and strong regulatory oversight. Policymakers should therefore mandate structured PPP risk-sharing frameworks, enforce affordability benchmarks in contractual agreements, and strengthen fiscal transparency and compliance-monitoring mechanisms to enhance performance and prevent inequitable outcomes.

Land administration reform represents another critical intervention area. Improving land tenure security, digitising land records, and simplifying land acquisition processes can significantly reduce housing production costs and increase accessibility for low-income households. Governments should pursue measurable improvements in land processing efficiency and transaction cost reduction through integrated digital cadastral systems and streamlined approval protocols. Integrated land-use planning, aligned with infrastructure provision, should be prioritised to ensure efficient and sustainable housing development.

In addition, the study underscores the importance of promoting architectural innovation within an enabling governance framework. Governments and professional bodies should incentivise the adoption of cost-efficient and low-carbon building technologies, including modular construction systems, passive design strategies, and sustainable materials, through regulatory incentives, tax rebates, and updated building codes. However, such innovations must be supported by enforceable technical standards and capacity-development programmes in the construction sector to bridge the gap between innovation and implementation.

- Conclusion

This study examined the governance mechanisms shaping affordable housing delivery systems through a systematic synthesis of peer-reviewed literature and global policy insights. Empirically, the study quantified the relative influence of governance variables, demonstrating that institutional coordination and regulatory efficiency exert the strongest impact on housing affordability, followed by PPP effectiveness, land administration systems, and architectural innovation. Theoretically, the findings reinforce Institutional Theory and Sustainable Transitions Theory by confirming that housing affordability emerges from the interaction of institutional structures, socio-technical systems, and market dynamics. Methodologically, the study contributes by integrating a PRISMA-based systematic review with inferential statistical validation, thereby providing a more robust and generalisable evidence base for housing governance

research. In practice, it offers actionable policy and design insights to improve housing delivery systems, particularly in developing contexts.

The results further reveal that isolated interventions are insufficient to address the complexity of housing challenges. Instead, effective housing delivery requires an integrated systems approach that aligns governance reforms with planning strategies, land administration efficiency, and design innovation. This aligns with contemporary theoretical perspectives that emphasise the interdependence of institutional, technological, and socio-economic factors in shaping development outcomes.

In developing contexts such as Nigeria, persistent weaknesses in institutional capacity, fragmented regulatory systems, and implementation gaps continue to constrain housing delivery. Addressing these challenges requires not only policy reform but also sustained commitment to institutional strengthening, digital transformation, and governance accountability.

Future research should extend this work through empirical case studies to validate governance-performance relationships at project and city scales, longitudinal analyses of housing policy impacts, and the integration of digital tools such as Building Information Modelling (BIM) and Life Cycle Assessment (LCA) to further quantify sustainability and cost-performance outcomes.

Ultimately, achieving affordable housing at scale depends on the ability of governments, private sector actors, and professionals to collaborate within a coherent governance framework. By integrating effective governance mechanisms with context-responsive architectural strategies, it is possible to deliver housing systems that are not only affordable but also sustainable, inclusive, and resilient.

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